EPA releases Bristol Bay Report describing potential impacts to salmon and wetlands from copper, gold mining

Agency launched study after requests for action to protect Bristol Bay from large-scale mining

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(Seattle—Jan. XX, 2014) The U.S. Environmental Protection Agency released its final Bristol Bay Report describing potential impacts to salmon and ecological resources from proposed large-scale copper and gold mining. The report, titled "An Assessment of Potential Mining Impacts on Salmon Ecosystems of Bristol Bay, Alaska," concludes that large-scale mining in the Bristol Bay watershed poses risks to salmon, wildlife and Native Alaska cultures. The report has been peer reviewed and verified by independent scientific experts.

"Over three years, EPA scientists and technical staff compiled the best, most current science on Bristol Bay to help us understand how mining in this region, an area of extraordinary natural resources, could impact salmon and wetlands," said Dennis McLerran, Regional Administrator for EPA Region 10. "Salmon are the cornerstone of this vast ecosystem. Our report concludes that mining poses real risks to salmon and tribal communities who depend on salmon and have harvested this resource for thousands of years."

Bristol Bay supports the largest sockeye salmon fishery in the world, producing nearly 50 percent of the world's global abundance of wild sockeye salmon with runs averaging 37.5 million fish each year. The area supports all five species of Pacific salmon found in North America: sockeye, coho, chinook, chum and pink. In addition, it is home to other fish species, 190 bird species, and more than 40 terrestrial animal species, including bears, moose and caribou.

In 2010, several Bristol Bay Alaska Native tribes requested that EPA take action under the Clean Water Act to protect Bristol Bay and salmon resources from development of the proposed Pebble Mine, a copper, gold and molybdenum mining venture backed by Northern Dynasty Minerals Ltd. Other tribes asked EPA to wait until a mine permitting process to weigh in on the environmental issues Pebble Mine would present.

Before responding to these requests, the agency determined the need for a scientific assessment. EPA scientists with expertise in Alaska fisheries, mining, geochemisty, anthropology, risk assessment and other disciplines reviewed information compiled by the State of Alaska, federal resource agencies, tribes and scientific institutions from around the world. EPA focused on the Kvichak and Nushagak River watersheds, which support half of the Bristol Bay sockeye salmon runs.

"As a scientific report, this study does not recommend policy or regulatory decisions. It is a technical resource for governments, tribes and the public as we consider how to address the challenges of mining and ecological protection in the Bristol Bay watershed," McLerran said.

Throughout the assessment, EPA maintained an open public process, reviewing and considering all comments and scientific data submitted during two separate public comment periods. The agency received 233,000 comments on the first draft of the assessment and approximately 895,000 comments on the second draft. EPA held eight public meetings attended by approximately 2,000 people.

As part of an independent peer review process, twelve scientists with expertise in mine engineering, salmon

fisheries biology, aquatic ecology, aquatic toxicology, hydrology, wildlife ecology, and Alaska Native cultures reviewed the assessment for its scientific quality. The same scientific peer reviewers evaluated the revised draft to determine how well EPA addressed their comments and suggestions.

To assess potential mining impacts to salmon resources, EPA developed realistic mine scenarios based on modern mining practices. The agency reviewed information about the copper deposit at the Pebble site and referred to a document submitted by Northern Dynasty Minerals Ltd. to the U.S. Securities and Exchange Commission The document, titled "Preliminary Assessment of the Pebble Project, Southwest, Alaska," provides detailed descriptions of three mine development cases comprising 25, 45 and 78 years of open pit mining.

EPA found several risks associated with large-scale mining:

- The collection, storage and treatment of extensive quantities of wastewater that would have to be contained and managed during mining and long after mining concludes.
- Miles of streams would be destroyed due to the mine footprint. EPA estimates 24-94 miles of streams and 2–7.6 square miles of wetlands, depending on the size of the mine.
- Polluted water from the mine site could enter streams through uncollected runoff from the waste rock piles and tailings storage facilities.
- A variety of water collection and treatment failures are possible, ranging from operational failures resulting in short-term releases of untreated leachates to long-term failures to operate water treatment systems.
- A transportation corridor to Cook Inlet that would cross many streams and wetlands, putting sockeye salmon spawning areas at risk.

EPA met with tribes, Alaska Native corporations, mining company representatives, state and local governments, tribal councils, fishing industry representatives, jewelry companies, seafood processors, restaurant owners, chefs, conservation organizations, members of the faith community, and members of Congress over the course of the assessment.

EPA conducted this assessment consistent with its authority to perform scientific assessments under Clean Water Act Sections 104(a) and (b).

For more information on the EPA Bristol Bay Report, visit: http://www2.epa.gov/bristolbay

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